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NEWS IPC8

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COST IN U.S. DOLLARS

SINCE FILE TOTAL SESSION 0.21 0.21

FULL ESTIMATED COST

SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 08:37:10 ON 06 AUG 2007

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* * * * * RECONNECTED TO STN INTERNATIONAL * * * * * * SESSION RESUMED IN FILE 'HOME' AT 08:45:33 ON 06 AUG 2007 FILE 'HOME' ENTERED AT 08:45:33 ON 06 AUG 2007

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
FULL ESTIMATED COST	ENTRY 0.21	SESSION 0.21
=> fil reg COST IN U.S. DOLLARS		
COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.42	0.42

FILE 'REGISTRY' ENTERED AT 08:45:51 ON 06 AUG 2007 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYPIGHT (C) 2007 American Chemical Society (ACS)

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http://www.cas.org/support/stngen/stndoc/properties.html

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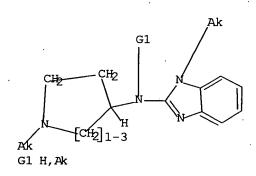
L1 STR

L2 2240 SEA FILE=REGISTRY SSS FUL L1

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L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

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L2 2240 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN

IN 3-Pyridinol, 2-[[6-[[(3,5-dimethylphenyl)amino]methyl]-2-[[1-[2-(4-morpholinyl)ethyl]-4-piperidinyl]amino]-1H-benzimidazol-1-yl]methyl]-6-methyl- (9CI)

MF C34 H45 N7 O2

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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Uploading C:\Program Files\Stnexp\Queries\10596519aaa.str

chain nodes :

10 11 12 13 20 21 22 30 32 33 34

ring nodes :

1 2 3 4 5 6 7 8 9 14 15 16 17 18 19 23 24 25 26 27 28

chain bonds :

1-30 4-20 5-21 6-22 8-13 9-10 10-11 10-12 13-14 13-32 14-33 17-34

ring bonds :

1-2 1-6 2-3 2-7 3-4 3-9 4-5 5-6 7-8 8-9 14-15 14-19 15-16 16-17 17-18

18-19 23-24 23-28 24-25 25-26 26-27 27-28

exact/norm bonds :

1-30 2-7 3-9 7-8 8-9 8-13 9-10 13-14 13-32 14-15 14-19 15-16 16-17 17-

18

17-34 18-19

exact bonds :

4-20 5-21 6-22 10-11 10-12 14-33

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6 23-24 23-28 24-25 25-26 26-27 27-28

G1:H,Ak

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:CLASS

11:CLASS 12:CLASS 13:CLASS 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom

20:CLASS 21:CLASS

22:CLASS 23:Atom 24:Atom 25:Atom 26:Atom 27:Atom 28:Atom 29:Atom 30:CLASS

32:CLASS

33:CLASS 34:CLASS

L3 STRUCTURE UPLOADED

L3 HAS NO ANSWERS STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

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100.0% PROCESSED

119 ITERATIONS

6 ANSWERS

SEARCH TIME: 00.00.01

PROJECTIONS (WITHIN SPECIFIED SUBSET): ONLINE **COMPLETE** PROJECTED ITERATIONS (WITHIN SPECIFIED SUBSET): 1726 TO 3034 PROJECTED ANSWERS (WITHIN SPECIFIED SUBSET): 6 TO 266

L4

6 SEA SUB=L2 SSS SAM L3

=> d scan

6 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN L4

3-Pyridinol, 6-methyl-2-[[4-methyl-2-[[1-[2-(1-pyrrolidinyl)ethyl]-4-[]]piperidinyl]amino]-1H-benzimidazol-1-yl]methyl]- (9CI) MF C26 H36 N6 O

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

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100.0% PROCESSED 2240 ITERATIONS SEARCH TIME: 00.00.01

64 ANSWERS

64 SEA SUB=L2 SSS FUL L3

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COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 43.35 43.77

FULL ESTIMATED COST

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=> s 15

L6 11 L5

=> d ibib abs hitstr 1-11

ANSWER 1 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN ACCESSION NUMBER: 2006:647626 CAPLUS Full-text

DOCUMENT NUMBER: 145:224185

TITLE: Cold virus fusion or stopping fusion cold - inhibitors

of the human respiratory syncytial virus F protein

AUTHOR(S): Del Vecchio, Alfred M.; Sarisky, Robert T.

CORPORATE SOURCE:

Infectious Diseases Research, Centocor, Inc., Radnor,

PA, 19087, USA

SOURCE: Recent Patents on Anti-Infective Drug Discovery

(2006), 1(2), 247-254

CODEN: RPADCX; ISSN: 1574-891X Bentham Science Publishers Ltd.

PUBLISHER: DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

A review. Human respiratory syncytial virus (HRSV) is a major respiratory viral pathogen causing moderate to severe upper and lower respiratory tract infections in all ages and across a wide range of patient populations. There are no currently approved vaccines and although a number of candidates are in various stages of development, the challenges are quite substantial. Presently, only a single agent is approved for HRSV prophylaxis, and therapeutic treatment options are severely limited and ineffective, particularly in the infant population. Antibody prophylaxis is restricted to use in populations at high-risk for hospitalization (infants under 35 wk gestational age, infants with chronic lung disease, and infants with congenital heart disease). Aerosol administration of the guanosine analog ribavirin has been approved for the treatment of severe HRSV LRTI in both children and mech. ventilated patients; however, there is still debate over

its overall benefit and the risks associated with its use. Current therapy for those hospitalized due to HRSV is supportive. As such, there is great medical need for the development of agents to prevent and treat $\ensuremath{\mathsf{HRSV}}$ infections in all populations. Interestingly, many of the discovered agents against HRSV, both neutralizing antibodies and small mols. inhibitors, target the viral fusion (F) glycoprotein. In particular, three distinct chemical classes as exemplified by JNJ-2408068, VP-14637, and BMS-433771, which appear to block conformational intermediates of the viral fusion protein are reviewed.

IT 317846-22-3, JNJ-2408068

RL: PAC (Pharmacological activity); PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (cold virus fusion or stopping fusion cold - inhibitors of human respiratory syncytial virus F protein)

RN 317846-22-3 CAPLUS

3-Pyridinol, 2-[[2-[[1-(2-aminoethyl)-4-piperidinyl]amino]-4-methyl-1H-CN benzimidazol-1-yl]methyl]-6-methyl- (9CI) (CA INDEX NAME)

REFERENCE COUNT:

78 THERE ARE 78 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

2005:1042075 CAPLUS Full-text

DOCUMENT NUMBER:

143:347207

TITLE:

Preparation of RSV replication-inhibiting

benzodiazepine derivatives for use in pharmaceutical compositions in combination with RSV fusion protein

inhibitors

INVENTOR(S):

Powell, Kenneth; Kelsey, Richard; Carter, Malcolm; Dowdell, Verity; Alber, Dagmar; Henderson, Elisa

PATENT ASSIGNEE(S):

Arrow Therapeutics Limited, UK

SOURCE:

PCT Int. Appl., 95 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

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NO, NZ, OM	, PG, PH, PL, PT,	RO, RU, SC, SD, SE, SG,	SK, SL, SM,		

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                                                                    20060919
PRIORITY APPLN. INFO.:
                                            GB 2004-6279
                                                                 A 20040319
                                            WO 2005-GB1029
                                                                W 20050318
OTHER SOURCE(S):
                         MARPAT 143:347207
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* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The invention is related to a pharmaceutical composition comprising pharmaceutically acceptable carrier or diluent and: (a) an inhibitor of the respiratory syncytial virus (RSV) fusion protein of formula I [X = H,(un) substituted alkyl; Y = hetero/aryl, alkyl, alkoxy, etc.; Z = CH2 and derivs.; R1 = H, CONH2 and derivs., CO2H and derivs., (un) substituted alkyl; R2 = H, NH2, alkenyl, etc.; R3 = H, alkenyl, CO2H, etc.; Q = 1,2dihydrobenzotriazol-1-yl, 2,3-dihydroindazol-1-yl, etc.]; and (b) a benzodiazepine derivative of formula II [R1 = alkyl, hetero/aryl; R2 = H, alkyl; each R3 = independently halo, OH, alkyl, alkoxy, NH2, CN, etc.; n = 0-3; R4 = H, alkyl; X = CO, SO, SO2, CONH and derivs.; R5 = (un) substituted hetero/aryl, heterocyclyl] capable of inhibiting RSV replication; the composition provides an additive and synergistic therapeutic effect in treating or preventing an RSV infection. The invention is also related to the preparation of benzodiazepines II. Thus, reacting (S)-3-Amino-5-phenyl-1,3dihydrobenzo[e][1,4]diazepin-2-one with 2-chloro-4-(morpholin-4-yl)benzoic acid gave (S)-III. The fractional inhibitory concentration (FIC) for benzodiazepine III in combination with benzimidazole IV = 0.3, demonstrating a synergistic interaction.

IT 317846-22-3

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(preparation of RSV replication-inhibiting benzodiazepine derivs. for use

in

pharmaceutical compos. in combination with RSV fusion protein inhibitors)

RN 317846-22-3 CAPLUS

CN 3-Pyridinol, 2-[[2-[[1-(2-aminoethyl)-4-piperidinyl]amino]-4-methyl-1H-benzimidazol-1-yl]methyl]-6-methyl- (9CI) (CA INDEX NAME)

REFERENCE COUNT:

THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN ACCESSION NUMBER: 2005:567167 CAPLUS Full-text

DOCUMENT NUMBER:

143:97363

TITLE:

Preparation of piperidine-amino-benzimidazole

derivatives as inhibitors of respiratory syncytial

virus replication

INVENTOR(S):

Bonfanti, Jean-Francois; Andries, Koenraad Jozef Lodewijk; Janssens, Frans Eduard; Sommen, Francois Maria; Guillemont, Jerome Emile Georges; Lacrampe,

Jean Fernand Armand

PATENT ASSIGNEE(S):

Tibotec Pharmaceuticals Ltd., Ire.

SOURCE:

PCT Int. Appl., 54 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

WO 2005058873 A1 20050630 WO 2004-EP53606 20041220 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG AU 2004298456 A1 20050630 AU 2004-298456 20041220 CA 2548654 A1 20050630 AU 2004-298456 20041220 CA 2548654 A1 20050630 CA 2004-2548654 20041220 R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, HR, LV, MK, YU CN 1894239 A 20070110 CN 2004-80037284 20041220	PATENT	PATENT NO.					KIND DATE			APPLICATION NO.						DATE		
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NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG AU 2004298456 Al 20050630 AU 2004-298456 Al 20050630 CA 2004-2548654 EP 1723136 Al 20061122 EP 2004-804942 20041220 R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, HR, LV, MK, YU		LK, LR	, LS,	LT,	LU,	LV,	MA,	MD,	MG.	MK.	MN.	MW.	MX.	M7.	NA.	NT.		
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG AU 2004298456 A1 20050630 AU 2004-298456 20041220 CA 2548654 A1 20050630 CA 2004-2548654 20041220 EP 1723136 A1 20061122 EP 2004-804942 20041220 R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, HR, LV, MK, YU		NO, NZ	, OM,	PG,	PH,	PL,	PT,	RO,	RU,	sc.	SD,	SE.	SG.	SK.	SIL	SY		
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG AU 2004298456 Al 20050630 AU 2004-298456 Al 20050630 CA 2004-2548654 EP 1723136 Al 20061122 EP 2004-804942 20041220 R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, HR, LV, MK, YU		TJ, TM	, TN,	TR,	TT,	TZ,	UA,	ŪĠ,	US,	UZ,	VC,	VN,	YU,	ZA.	ZM.	ZW		
AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG AU 2004298456 Al 20050630 AU 2004-298456 CA 2548654 Al 20050630 CA 2004-2548654 EP 1723136 Al 20061122 EP 2004-804942 CO041220 R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, HR, LV, MK, YU	RW:	BW, GH	, GM,	ΚE,	LS,	MW,	MZ,	NA,	SD,	SL,	SZ,	TZ.	UG.	ZM.	ZW.	AM.		
EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG AU 2004298456 A1 20050630 AU 2004-298456 CA 2548654 A1 20050630 CA 2004-2548654 EP 1723136 A1 20061122 EP 2004-804942 CO041220 R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, HR, LV, MK, YU		AZ, BY	, KG,	ΚZ,	ΜD,	RU,	ТJ,	TM,	AT,	BE,	BG,	CH.	CY.	CZ.	DE.	DK.		
RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG AU 2004298456 A1 20050630 AU 2004-298456 CA 2548654 A1 20050630 CA 2004-2548654 EP 1723136 A1 20061122 EP 2004-804942 CA 2548654 R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, HR, LV, MK, YU		EE, ES,	, FI,	FR,	GB,	GR,	ΗŲ,	IE,	IS,	IT.	LT,	LU.	MC.	NI.	PI.	PT.		
MR, NE, SN, TD, TG AU 2004298456 A1 20050630 AU 2004-298456 20041220 CA 2548654 A1 20050630 CA 2004-2548654 20041220 EP 1723136 A1 20061122 EP 2004-804942 20041220 R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, HR, LV, MK, YU		RO, SE	, SI,	SK,	TR,	BF,	ВJ,	CF,	CG,	CI,	CM,	GA.	GN.	GO.	GW.	MI.		
CA 2548654 A1 20050630 CA 2004-2548654 20041220 EP 1723136 A1 20061122 EP 2004-804942 20041220 R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, HR, LV, MK, YU		MR, NE	, SN,	TD,	ΤG													
CA 2548654 A1 20050630 CA 2004-2548654 20041220 EP 1723136 A1 20061122 EP 2004-804942 20041220 R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, HR, LV, MK, YU	AU 2004	298456		A1		2005	0630	i	AU 2	Ö04-	2984	56		2	0041:	220		
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LV, MK, YU		IS, IT,	LI,	LT,	LU,	MC,	NL,	PL,	PT,	RO,	SE.	SI.	SK.	TR.	AI.	HR.		
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MX 2006PA07109 A 20060823 MX 2006-PA7109 20060619	MX 2006	MX 2006PA07109				2006	0823											
PRIORITY APPLN. INFO.: EP 2003-104802 A 20031218	PRIORITY APP																	

OTHER SOURCE(S):

MARPAT 143:97363

$$R^{5}$$
 N
 R^{2}
 R^{2}
 R^{3}
 R^{2}
 R^{3}

The title compds. I [Q = alkyl optionally substituted with CF3, cycloalkyl, hydroxy, alkoxy, etc.; G = a direct bond or (un)substituted alkanediyl; R1 = Ar1 or a monocyclic or bicyclic heterocycle; one of R2a and R3a = alkyl and the other one of R2a and R3a = H; in case R2a is different from hydrogen then R2b = H or alkyl, and R3b = H; in case R3a is different from hydrogen then R3b = H or alkyl, and R2b = H; t = 1-3; Ar1 = (un)substituted Ph; R5 = H, alkyl; and their prodrugs, N-oxides, addition salts, quaternary amines, metal complexes and stereochem. isomeric forms] having inhibitory activity on the replication of the respiratory syncytial virus, were prepared E.g., a multistep synthesis of II, starting from 4,5-dimethylbenzimidazol-2-one, was given. The exemplified compds. I were tested for activity against RSV (data given). The pharmaceutical composition comprising the compound is disclosed.

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(preparation of 2-(piperidin-4-ylamino)benzimidazoles as inhibitors of respiratory syncytial virus replication)

RN 856705-85-6 CAPLUS

CN

3-Pyridinol, 2-[[2-[[1-(2-hydroxyethyl)-4-piperidinyl]amino]-4-methyl-1H-benzimidazol-1-yl]methyl]-6-methyl- (9CI) (CA INDEX NAME)

RN 856706-12-2 CAPLUS

CN 2-Butanone, 1-[4-[[1-[(3-hydroxy-6-methyl-2-pyridinyl)methyl]-4-methyl-1H-benzimidazol-2-yl]amino]-1-piperidinyl]-3-methyl- (9CI) (CA INDEX NAME)

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856705-79-8P 856705-80-1P 856705-81-2P
IT
     856705-82-3P 856705-84-5P 856705-86-7P
     856705-87-8P 856705-88-9P 856705-89-0P
     856705-90-3P 856705-91-4P 856705-92-5P
     856705-93-6P 856705-94-7P 856705-95-8P
     856705-96-9P 856705-97-0P 856705-98-1P
     856705-99-2P 856706-00-8P 856706-01-9P
     856706-02-0P 856706-03-1P 856706-04-2P
     856706-05-3P 856706-06-4P 856706-07-5P
     856706-08-6P 856706-09-7P 856706-10-0P
     856706-11-1P 856706-13-3P 856706-14-4P
     856706-15-5P 856706-16-6P 856706-17-7P
     RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU
     (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
     (Uses)
        (preparation of 2-(piperidin-4-ylamino)benzimidazoles as inhibitors of
        respiratory syncytial virus replication)
RN .
     856705-79-8 CAPLUS
     1-Piperidinepropanoic acid, \alpha-amino-4-[[1-[(3-hydroxy-6-methyl-2-
CN
     pyridinyl)methyl]-4-methyl-1H-benzimidazol-2-yl]amino]-, methyl ester,
     monohydrochloride (9CI) (CA INDEX NAME)
```

Me
$$CH_2$$
 CH_2 CH_2 CH_2 CH_2 CH_3 CH_4 CH_5 CH_5

● HCl

RN 856705-80-1 CAPLUS
CN 3-Pyridinol, 6-methyl-2-[[4-methyl-2-[[1-[2-(1-pyrrolidinyl)ethyl]-4-piperidinyl]amino]-1H-benzimidazol-1-yl]methyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c}
Me \\
N \\
N \\
N \\
N \\
CH_2 \\
N \\
Me
\end{array}$$

$$\begin{array}{c}
N \\
CH_2 \\
N \\
Me
\end{array}$$

RN 856705-81-2 CAPLUS .

CN 1-Piperidinepropanesulfonamide, 4-[[1-[(3-hydroxy-6-methyl-2-pyridinyl)methyl]-4-methyl-1H-benzimidazol-2-yl]amino]- (9CI) (CA INDEX NAME)

Me NH NH Me
$$(CH_2)_3 - \stackrel{\circ}{\parallel}_{S-NH_2}$$

RN 856705-82-3 CAPLUS

CN 1,2-Propanediol, 3-[4-[[1-[(3-hydroxy-6-methyl-2-pyridinyl)methyl]-4-methyl-1H-benzimidazol-2-yl]amino]-1-piperidinyl]- (9CI) (CA INDEX NAME)

RN 856705-84-5 CAPLUS

CN 3-Pyridinol, 2-[[2-[[1-[2-(3,6-dihydro-1(2H)-pyridinyl)ethyl]-4-piperidinyl]amino]-4-methyl-1H-benzimidazol-1-yl]methyl]-6-methyl- (9CI) (CA INDEX NAME)

RN 856705-86-7 CAPLUS

CN 1-Piperidinepropanoic acid, α -amino-4-[[1-[(3-hydroxy-6-methyl-2-pyridinyl)methyl]-4-methyl-1H-benzimidazol-2-yl]amino]-, monohydrochloride (9CI) (CA INDEX NAME)

Me
$$CH_2$$
 CH_2 CH_2

● HCl

RN 856705-87-8 CAPLUS

CN Benzeneacetic acid, 2-[4-[[1-[(3-hydroxy-6-methyl-2-pyridinyl)methyl]-4-methyl-1H-benzimidazol-2-yl]amino]-1-piperidinyl]ethyl ester (9CI) (CA INDEX NAME)

Me
$$CH_2-CH_2-O$$
 CH_2-PP CH_2-CH_2-O CH_2-PP CH_2-CH_2-O CH_2-PP CH_2-CH_2-O CH_2-PP CH_2-CH_2-O CH_2-PP

RN 856705-88-9 CAPLUS

CN 3-Pyridinol, 2-[[2-[[1-[2-(hexahydro-1H-azepin-1-yl)ethyl]-4-piperidinyl]amino]-4-methyl-1H-benzimidazol-1-yl]methyl]-6-methyl- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} Me & N-CH_2-CH_2-N \\ \hline N & N-CH_2-CH_2-N \\ \hline N & Me \\ \hline \end{array}$$

RN 856705-89-0 CAPLUS

CN 3-Pyridinol, 2-[[2-[[1-[2-(2,5-dihydro-1H-pyrrol-1-yl)ethyl]-4-

piperidinyl]amino]-4-methyl-1H-benzimidazol-1-yl]methyl]-6-methyl- (9CI)
(CA INDEX NAME)

RN 856705-90-3 CAPLUS

CN 1-Piperidinepropanamide, 4-[[1-[(3-hydroxy-6-methyl-2-pyridinyl)methyl]-4-methyl-1H-benzimidazol-2-yl]amino]- (9CI) (CA INDEX NAME)

RN 856705-91-4 CAPLUS

CN 1-Piperidinepropanesulfonamide, 4-[[1-[(3-hydroxy-6-methyl-2-pyridinyl)methyl]-4-methyl-1H-benzimidazol-2-yl]amino]-N-methyl- (9CI) (CA INDEX NAME)

RN 856705-92-5 CAPLUS

CN 3-Pyridinol, 2-[[2-[[1-[1-(hydroxymethyl)propyl]-4-piperidinyl]amino]-4-methyl-1H-benzimidazol-1-yl]methyl]-6-methyl- (9CI) (CA INDEX NAME)

RN 856705-93-6 CAPLUS

CN 1-Piperidineacetic acid, 4-[[1-[(3-hydroxy-6-methyl-2-pyridinyl)methyl]-4-methyl-1H-benzimidazol-2-yl]amino]-, monohydrochloride (9CI) (CA INDEX NAME)

● HCl

RN 856705-94-7 CAPLUS

CN 1-Piperidinepentanamide, 4-[[1-[(3-hydroxy-6-methyl-2-pyridinyl)methyl]-4-methyl-1H-benzimidazol-2-yl]amino]- (9CI) (CA INDEX NAME)

RN 856705-95-8 CAPLUS

CN 1-Piperidinepropanoic acid, 4-[[1-[(3-hydroxy-6-methyl-2-pyridinyl)methyl]-4-methyl-1H-benzimidazol-2-yl]amino]-, ethyl ester (9CI) (CA INDEX NAME)

RN 856705-96-9 CAPLUS

CN 1-Piperidinepropanoic acid, 4-[[1-[(3-hydroxy-6-methyl-2-pyridinyl)methyl]-4-methyl-1H-benzimidazol-2-yl]amino]-, monohydrochloride (9CI) (CA INDEX NAME)

HCl

RN 856705-97-0 CAPLUS

CN 3-Pyridinol, 6-methyl-2-[[4-methyl-2-[(1-methyl-4-piperidinyl)amino]-1H-benzimidazol-1-yl]methyl]- (9CI) (CA INDEX NAME)

RN 856705-98-1 CAPLUS

CN 3-Pyridinol, 2-[[2-[[1-(2-hydroxy-3-methylbutyl)-4-piperidinyl]amino]-4-methyl-1H-benzimidazol-1-yl]methyl]-6-methyl- (9CI) (CA INDEX NAME)

RN 856705-99-2 CAPLUS

CN Benzenesulfonamide, 4-[3-[4-[[1-[(3-hydroxy-6-methyl-2-pyridinyl)methyl]-4-methyl-1H-benzimidazol-2-yl]amino]-1-piperidinyl]propoxy]- (9CI) (CA INDEX NAME)

RN 856706-00-8 CAPLUS

CN 3-Pyridinol, 2-[[2-[[1-[2-[(aminocarbonyl)oxy]ethyl]-4-piperidinyl]amino]-4-methyl-1H-benzimidazol-1-yl]methyl]-6-methyl- (9CI) (CA INDEX NAME)

RN 856706-01-9 CAPLUS

CN 3-Pyridinol, 2-[[2-[[1-[2-(1H-imidazol-1-yl)ethyl]-4-piperidinyl]amino]-4-methyl-1H-benzimidazol-1-yl]methyl]-6-methyl- (9CI) (CA INDEX NAME)

RN 856706-02-0 CAPLUS

CN 3-Pyridinol, 2-[[2-[[1-(2-hydroxy-2-phenylethyl)-4-piperidinyl]amino]-4-methyl-1H-benzimidazol-1-yl]methyl]-6-methyl- (9CI) (CA INDEX NAME)

RN 856706-03-1 CAPLUS

CN 2-Butanone, 1-[4-[[1-[(3-hydroxy-6-methyl-2-pyridinyl)methyl]-4-methyl-1H-benzimidazol-2-yl]amino]-1-piperidinyl]-3,3-dimethyl- (9CI) (CA INDEX NAME)

Me
$$CH_2 - C - Bu - t$$
 $CH_2 - C - Bu - t$
 $CH_2 - C - Bu - t$

RN 856706-04-2 CAPLUS

CN 3-Pyridinol, 2-[[2-[[1-[2-hydroxy-3-(4-methoxyphenoxy)propyl]-4-piperidinyl]amino]-4-methyl-1H-benzimidazol-1-yl]methyl]-6-methyl- (9CI) (CA INDEX NAME)

RN 856706-05-3 CAPLUS

CN 3-Pyridinol, 2-[[2-[[1-[3-(3-fluorophenoxy)-2-hydroxypropyl]-4-piperidinyl]amino]-4-methyl-1H-benzimidazol-1-yl]methyl]-6-methyl- (9CI) (CA INDEX NAME)

Me N—
$$CH_2$$
— CH_2 —

RN 856706-06-4 CAPLUS

CN 3-Pyridinol, 2-[[2-[[1-(2-hydroxy-3-phenoxypropyl)-4-piperidinyl]amino]-4-methyl-1H-benzimidazol-1-yl]methyl]-6-methyl- (9CI) (CA INDEX NAME)

RN 856706-07-5 CAPLUS

CN 1-Piperidineacetamide, 4-[[1-[(3-hydroxy-6-methyl-2-pyridinyl)methyl]-4-methyl-1H-benzimidazol-2-yl]amino]- (9CI) (CA INDEX NAME)

RN 856706-08-6 CAPLUS

CN 3-Pyridinol, 2-[[2-[[1-(2-hydroxy-3-phenylpropyl)-4-piperidinyl]amino]-4-methyl-1H-benzimidazol-1-yl]methyl]-6-methyl- (9CI) (CA INDEX NAME)

RN 856706-09-7 CAPLUS

CN 3-Pyridinol, 6-methyl-2-[[4-methyl-2-[[1-[2-(4H-1,2,4-triazol-4-yl)ethyl]-4-piperidinyl]amino]-1H-benzimidazol-1-yl]methyl]- (9CI) (CA INDEX NAME)

RN 856706-10-0 CAPLUS

CN Benzoic acid, 4-[3-[4-[[1-[(3-hydroxy-6-methyl-2-pyridinyl)methyl]-4-methyl-1H-benzimidazol-2-yl]amino]-1-piperidinyl]propoxy]-, ethyl ester (9CI) (CA INDEX NAME)

RN 856706-11-1 CAPLUS

CN 3-Pyridinol, 6-methyl-2-[[4-methyl-2-[[1-(3-methylbutyl)-4-piperidinyl]amino]-1H-benzimidazol-1-yl]methyl]- (9CI) (CA INDEX NAME)

RN 856706-13-3 CAPLUS

CN 3-Pyridinol, 2-[[2-[[1-(2-hydroxy-3,3-dimethylbutyl])-4-piperidinyl]amino]-4-methyl-1H-benzimidazol-1-yl]methyl]-6-methyl- (9CI) (CA INDEX NAME)

RN 856706-14-4 CAPLUS

CN Acetic acid, [2-[4-[[1-[(3-hydroxy-6-methyl-2-pyridinyl)methyl]-4-methyl-1H-benzimidazol-2-yl]amino]-1-piperidinyl]ethoxy]-, methyl ester (9CI) (CA INDEX NAME)

RN 856706-15-5 CAPLUS

CN Benzoic acid, 3-[3-[4-[[1-[(3-hydroxy-6-methyl-2-pyridinyl)methyl]-4-methyl-1H-benzimidazol-2-yl]amino]-1-piperidinyl]propoxy]-, ethyl ester (9CI) (CA INDEX NAME)

RN 856706-16-6 CAPLUS

CN 1-Piperidineacetic acid, 4-[[1-[(3-hydroxy-6-methyl-2-pyridinyl)methyl]-4-methyl-1H-benzimidazol-2-yl]amino]-, ethyl ester (9CI) (CA INDEX NAME)

RN 856706-17-7 CAPLUS

CN 3-Pyridinol, 2-[[2-[[1-[(1-hydroxycyclohexyl)methyl]-4-piperidinyl]amino]-4-methyl-1H-benzimidazol-1-yl]methyl]-6-methyl- (9CI) (CA INDEX NAME)

IT 856706-34-8

RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of 2-(piperidin-4-ylamino)benzimidazoles as inhibitors of
 respiratory syncytial virus replication)

RN 856706-34-8 CAPLUS

CN 1-Piperidinecarboxylic acid, 4-[[1-[(3-hydroxy-6-methyl-2-pyridinyl)methyl]-4-methyl-1H-benzimidazol-2-yl]amino]-, ethyl ester (9CI) (CA INDEX NAME)

IT 856706-26-8P 856706-27-9P 856706-29-1P 856706-30-4P 856706-31-5P 856706-32-6P

856706-33-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent)

(preparation of 2-(piperidin-4-ylamino)benzimidazoles as inhibitors of respiratory syncytial virus replication)

RN 856706-26-8 CAPLUS

CN 1-Piperidinepropanoic acid, α -[[(1,1-dimethylethoxy)carbonyl]amino]- 4-[[1-[(3-hydroxy-6-methyl-2-pyridinyl)methyl]-4-methyl-1H-benzimidazol-2-yl]amino]-, methyl ester (9CI) (CA INDEX NAME)

RN 856706-27-9 CAPLUS

CN 1-Piperidinecarboxylic acid, 4-[[4-methyl-1-[[6-methyl-3-(phenylmethoxy)-2-pyridinyl]methyl]-1H-benzimidazol-2-yl]amino]-, ethyl ester (9CI) (CA INDEX NAME)

RN 856706-29-1 CAPLUS

CN 1-Piperidineacetic acid, 4-[[4-methyl-1-[[6-methyl-3-(phenylmethoxy)-2-pyridinyl]methyl]-1H-benzimidazol-2-yl]amino]-, ethyl ester (9CI) (CA INDEX NAME)

RN 856706-30-4 CAPLUS

CN 1-Piperidineethanol, 4-[[4-methyl-1-[[6-methyl-3-(phenylmethoxy)-2-pyridinyl]methyl]-1H-benzimidazol-2-yl]amino]- (9CI) (CA INDEX NAME)

RN 856706-31-5 CAPLUS

CN 3-Pyridinol, 2-[[2-[[1-(2-chloroethyl)-4-piperidinyl]amino]-4-methyl-1H-benzimidazol-1-yl]methyl]-6-methyl- (9CI) (CA INDEX NAME)

RN 856706-32-6 CAPLUS

CN Benzeneacetic acid, 2-[4-[[4-methyl-1-[[6-methyl-3-(phenylmethoxy)-2-pyridinyl]methyl]-1H-benzimidazol-2-yl]amino]-1-piperidinyl]ethyl ester (9CI) (CA INDEX NAME)

RN 856706-33-7 CAPLUS

1-Piperidineethanol, 4-[[4-methyl-1-[[6-methyl-3-(phenylmethoxy)-2-CN pyridinyl]methyl]-1H-benzimidazol-2-yl]amino]-, carbamate (ester) (9CI) (CA INDEX NAME)

Me
$$CH_2-CH_2-O-C-NH_2$$
 $CH_2-CH_2-O-C-NH_2$
 $CH_2-CH_2-O-C-NH_2$
 $CH_2-CH_2-O-C-NH_2$
 $CH_2-CH_2-O-C-NH_2$

REFERENCE COUNT:

6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 4 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN ACCESSION NUMBER: 2005:564655 CAPLUS Full-text

DOCUMENT NUMBER:

143:97374

TITLE:

Preparation of morpholine containing benzimidazoles as inhibitors of respiratory syncytial virus replication

INVENTOR(S):

Bonfanti, Jean-Francois; Andries, Koenraad Jozef Lodewijk; Fortin, Jerome Michel Claude; Muller, Philippe; Doublet, Frederic Marc Maurice; Meyer, Christophe; Willebrords, Rudy Edmond; Gevers, Tom

Valerius Josepha; Timmerman, Philip Maria Martha Bern

PATENT ASSIGNEE(S): Tibotec Pharmaceuticals Ltd., Ire.

SOURCE:

PCT Int. Appl., 144 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO.					KIND DATE			APPLICATION NO.						DATE			
WO 2005058871					A1 20050630				WO 2004-EP53620								
WO			-				2005	0630	1	WO 2	004-	EP53	620		2	0041	220
	W:	ΑE,	ΑG,	AL,	AM,	ΑT,	AU,	AZ,	BA,	BB,	BG,	BR,	BW,	BY,	BZ,	CA,	CH,
		CN,	co,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	EG,	ES,	FI,	GB,	GD.
		GE,	GH,	GM,	HR,	HU,	ID,	IL,	IN,	IS,	JΡ,	KE,	KG,	KP,	KR,	KZ,	LC,
		LK,	LR,	LS,	LT,	LU,	LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,	NA,	NI,
		NO,	NZ,	OM,	PG,	PH,	PL,	PT,	RO,	·RU,	SC,	SD,	SE,	SG,	SK,	SL,	SY,

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TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
             EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
             RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
             MR, NE, SN, TD, TG
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                                 20050630
                                             AU 2004-298460
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                           A1
                                 20050630
                                             CA 2004-2548668
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                           A1
                                 20060906
                                             EP 2004-817576
                                                                     20041220
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             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK,
             HR, IS, YU
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                                             US 2006-563691
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                                             MX 2006-PA7112
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     NO 2006003322
                                             NO 2006-3322
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PRIORITY APPLN. INFO.:
                                             EP 2003-104810
                                                                     20031218
                                             US 2004-567182P
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                                             EP 2004-105312
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                                             WO 2004-EP53620
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OTHER SOURCE(S):

MARPAT 143:97374

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AΒ The title compds. I [G = a direct bond or (un) substituted alkanediyl; R1 = Ar1 or a monocyclic or bicyclic heterocycle; $Q \doteq R7$, pyrrolidinyl substituted with R7, piperidinyl substituted with R7 or homopiperidinyl substituted with R7; one of R2a and R3a = halo, optionally mono- or polysubstituted alkyl, optionally mono- or polysubstituted alkenyl, nitro, hydroxy, etc.; and the other one of R2a and R3a = H; in case R2a is different from H atom then R2b = H, alkyl or halogen and R3b = H; in case R3a is different from H atom then R3b = H, alkyl or halogen and R2b = H; R5 = H, alkyl; Ar1 = (un)substituted Ph; R7 = alkyl substituted with heterocycle or alkyl substituted with both a radical OR8 and a heterocycle; R8 = H, alkyl, Arlalkyl; or a prodrug, N-oxide, addition salt, quaternary amine, metal complex or stereochem. isomeric form thereof] having inhibitory activity on the replication of the respiratory syncytial virus, were prepared E.g., a multi-step synthesis of II, starting from Et 3,4-diaminobenzoate, was given. The compds. I were tested for

activity against RSV (data given). The pharmaceutical composition comprising the compound I is disclosed.

IT 857068-52-1P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of morpholine containing benzimidazoles as inhibitors of respiratory syncytial virus replication)

RN 857068-52-1 CAPLUS

CN 3-Pyridinol, 6-methyl-2-[[4-methyl-2-[[1-[2-(4-morpholinyl)ethyl]-4-piperidinyl]amino]-1H-benzimidazol-1-yl]methyl]- (9CI) (CA INDEX NAME)

REFERENCE COUNT:

THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

2005:494325 CAPLUS Full-text

DOCUMENT NUMBER:

143:90328

TITLE:

Small molecules VP-14637 and JNJ-2408068 inhibit respiratory syncytial virus fusion by similar

mechanisms

AUTHOR(S):

Douglas, Janet L.; Panis, Marites L.; Ho, Edmund; Lin, Kuei-Ying; Krawczyk, Steve H.; Grant, Deborah M.; Cai, Ruby; Swaminathan, Swami; Chen, Xiaowu; Cihlar, Tomas

CORPORATE SOURCE:

SOURCE:

PUBLISHER:

Gilead, Foster City, CA, 94404, USA Antimicrobial Agents and Chemotherapy (2005), 49(6),

2460-2466

CODEN: AMACCQ; ISSN: 0066-4804 American Society for Microbiology

DOCUMENT TYPE:

Journal English

LANGUAGE:

AB Here we present data on the mechanism of action of VP-14637 and JNJ-2408068 (formerly R-170591), two small-mol. inhibitors of respiratory syncytial virus (RSV). Both inhibitors exhibited potent antiviral activity with 50% effective concns. (EC50s) of 1.4 and 2.1 nM, resp. A similar inhibitory effect was observed in a RSV-mediated cell fusion assay (EC50 = 5.4 and 0.9 nM, resp.). Several drug-resistant RSV variants were selected in vitro in the presence of each compound All selected viruses exhibited significant cross-resistance to both inhibitors and contained various single amino acid substitutions in two distinct regions of the viral F protein, the heptad repeat 2 (HR2; mutations D486N, E487D, and F488Y), and the intervening domain between HR1 and HR2 (mutation K399I and T400A). Studies using [3H]VP-14637 revealed a specific binding of the compound to RSV-infected cells that was efficiently inhibited by JNJ-2408068 (50% inhibitory concentration = 2.9 nM) but not by the HR2derived peptide T-118. Further anal. using a transient T7 vaccinia expression system indicated that RSV F protein is sufficient for this interaction. F proteins containing either the VP-14637 or JNJ-2408068 resistance mutations exhibited greatly reduced binding of [3H]VP-14637. Mol. modeling anal.

suggests that both mols. may bind into a small hydrophobic cavity in the inner core of F protein, interacting simultaneously with both the HR1 and HR2 domains. Altogether, these data indicate that VP-14637 and JNJ-2408068 interfere with RSV fusion through a mechanism involving a similar interaction with the F protein.

IT 317846-22-3, JNJ-2408068

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(small mols. VP-14637 and JNJ-2408068 inhibit respiratory syncytial virus fusion by similar mechanisms by binding into a small hydrophobic cavity in the inner core of F protein, interacting simultaneously with both the HR1 and HR2 domains)

RN 317846-22-3 CAPLUS

CN 3-Pyridinol, 2-[[2-[[1-(2-aminoethyl)-4-piperidinyl]amino]-4-methyl-1H-benzimidazol-1-yl]methyl]-6-methyl- (9CI) (CA INDEX NAME)

REFERENCE COUNT:

25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

2003:923920 CAPLUS Full-text

DOCUMENT NUMBER:

140:246197

TITLE:

Short duration aerosols of JNJ 2408068 (R170591) administered prophylactically or therapeutically protect cotton rats from experimental respiratory

syncytial virus infection

AUTHOR(S):

Wyde, Philip R.; Chetty, Srikrishna N.; Timmerman,

Philip; Gilbert, Brian E.; Andries, Koen

CORPORATE SOURCE:

Department of Molecular Virology and Microbiology, Baylor College of Medicine, Houston, TX, 77030, USA

Antiviral Research (2003), 60(3), 221-231

CODEN: ARSRDR; ISSN: 0166-3542

PUBLISHER:

SOURCE:

Elsevier Science B.V.

DOCUMENT TYPE:

Journal

DOCUMENT TIPE:

English

LANGUAGE:

Cotton rats exposed to continuous small droplet aerosols of 2[[2-[[1-(2-aminoethyl)-4-piperidinyl]amino]-4-methyl-1H-benzimidazol-1- yl]methyl]-6-methyl-3-pyridinol (JNJ 2408068) or its hydrochloric salt for only 15 min, one day prior to virus inoculation or one day after, were significantly protected from pulmonary respiratory syncytial virus (RSV) infection compared to control animals similarly infected but exposed to aerosols of placebo at these times. No evidence of toxicity was seen in any of these animals or in cotton rats administered 10 times the min. cotton rat efficacious dose (i.e. 10+0.39 mg of active compound per kg of body weight) for four continuous days. The marked selective antiviral activity observed in the cotton rats mirrored that seen for these compds. in cytotoxicity and antiviral assays performed against RSV

in vitro. Plasma kinetics and tissue distribution of JNJ 2408068 in cotton rats following inhalation were determined in sep. expts. performed using conditions similar to those utilized in the in vivo efficacy studies. The data from these expts. indicated that significant levels of the test compound were delivered to the lungs of exposed animals, but that extrapulmonary distribution was limited.

IT 317846-22-3, JNJ 2408068

RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(short duration aerosols of JNJ 2408068 (R170591) administered prophylactically or therapeutically protect cotton rats from exptl. respiratory syncytial virus infection)

RN 317846-22-3 CAPLUS

CN 3-Pyridinol, 2-[[2-[[1-(2-aminoethyl)-4-piperidinyl]amino]-4-methyl-1H-benzimidazol-1-yl]methyl]-6-methyl- (9CI) (CA INDEX NAME)

IT 669772-70-7

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(short duration aerosols of JNJ 2408068 (R170591) administered prophylactically or therapeutically protect cotton rats from exptl. respiratory syncytial virus infection)

RN 669772-70-7 CAPLUS

CN 3-Pyridinol, 2-[[2-[[1-(2-aminoethyl)-4-piperidinyl]amino]-4-methyl-1H-benzimidazol-1-yl]methyl]-6-methyl-, monohydrochloride (9CI) (CA INDEX NAME)

HCl

L6 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

2003:923919 CAPLUS Full-text

DOCUMENT NUMBER:

140:296902

TITLE:

Substituted benzimidazoles with nanomolar activity

against respiratory syncytial virus

AUTHOR(S):

Andries, Koen; Moeremans, Marc; Gevers, Tom; Willebrords, Rudy; Sommen, Cois; Lacrampe, Jean;

Janssens, Frans; Wyde, Philip R.

CORPORATE SOURCE:

Johnson and Johnson Pharmaceutical Research and

Development, Beerse, Belg..

SOURCE:

Antiviral Research (2003), 60(3), 209-219

CODEN: ARSRDR; ISSN: 0166-3542

PUBLISHER:

Elsevier Science B.V.

DOCUMENT TYPE:

Journal

LANGUAGE:

English

A cell-based assay was used to discover compds. inhibiting respiratory AB syncytial virus (RSV)-induced fusion in HeLa/M cells. A lead compound was identified and subsequent synthesis of >300 analogs led to the identification of JNJ 2408068 (R170591), a low mol. weight (MW 395) benzimidazole derivative with an EC50 (0.16 nM) against some laboratory strains almost 100,000 times better than that of ribavirin (15 μM). Antiviral activity was confirmed for subgroup A and B clin. isolates of human RSV and for a bovine RSV isolate. The compound did not inhibit the growth of representative viruses from other Paramyxovirus genera, i.e. HPIV2 and Mumps Virus (genus Rubulavirus), HPIV3 (genus Respirovirus), Measles virus (genus Morbillivirus) and hMPV. Efficacy in cytopathic effect inhibition assays correlated well with efficacy in virus yield reduction assays. A concentration of 10 nM reduced RSV production 1000fold in multi-cycle expts., irresp. of the multiplicity of infection. Time of addition studies pointed to a dual mode of action: inhibition of virus-cell fusion early in the infection cycle and inhibition of cell-cell fusion at the end of the replication cycle. Two resistant mutants were raised and shown to have single point mutations in the F-gene (S398L and D486N). JNJ 2408068 was also shown to inhibit the release of proinflammatory cytokines IL-6, IL-8 and Rantes from RSV-infected A549 cells.

IT 317846-22-3, JNJ 2408068

RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(substituted benzimidazoles with nanomolar activity against respiratory syncytial virus)

RN 317846-22-3 CAPLUS

CN 3-Pyridinol, 2-[[2-[[1-(2-aminoethyl)-4-piperidinyl]amino]-4-methyl-1H-benzimidazol-1-yl]methyl]-6-methyl- (9CI) (CA INDEX NAME)

REFERENCE COUNT:

THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:742431 CAPLUS Full-text

DOCUMENT NUMBER: 140:192261

TITLE: Comparison of the inhibition of human metapneumovirus

and respiratory syncytial virus by ribavirin and

immune serum globulin in vitro

AUTHOR(S): Wyde, Philip R.; Chetty, Srikrishna N.; Jewell, Alan

M.; Boivin, Guy; Piedra, Pedro A.

CORPORATE SOURCE: Departments of Molecular Virology and Microbiology,

Baylor College of Medicine, Houston, TX, 77030, USA

Antiviral Research (2003), 60(1), 51-59

CODEN: ARSRDR; ISSN: 0166-3542

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal LANGUAGE: English

SOURCE:

Human metapneumovirus (hMPV) is a newly recognized pathogen that like its AB better-known relative, human respiratory syncytial virus (hRSV), appears to be ubiquitous and an important cause of respiratory disease in diverse subpopulations. No antivirals or vaccines are currently approved for the treatment or prevention of hMPV infections. However, ribavirin is licensed to treat serious hRSV-induced infections in children and immune globulin designed for i.v. administration (IVIG) and palivizumab (Synagis), a humanized monoclonal antibody preparation, have been utilized as alternatives to vaccines for preventing or reducing the severity of infections caused by this virus. Because both ribavirin and IVIG have broad viral specificities, studies were performed to compare the ability of these two agents to inhibit the replication of hRSV and hMPV in tissue culture-based assays. Two exptl. chemotherapeutic agents (i.e. VP14637 and JNJ2408068) and different antibody prepns. were included in this testing for comparison. Ribavirin and the IVIG utilized were found to have equivalent antiviral activity against hMPV and hRSV. In contrast, except for antisera specifically raised against hMPV, all of the other materials tested had marked activity only against hRSV.

IT 317846-22-3, JNJ 2408068

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(inhibition of human metapneumovirus vs. respiratory syncytial virus by ribavirin and immune serum globulin in vitro)

RN 317846-22-3 CAPLUS

CN 3-Pyridinol, 2-[[2-[[1-(2-aminoethyl)-4-piperidinyl]amino]-4-methyl-1H-benzimidazol-1-yl]methyl]-6-methyl- (9CI) (CA INDEX NAME)

REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

2003:495542 CAPLUS Full-text

DOCUMENT NUMBER:

140:56326

TITLE:

AUTHOR(S):

Structural characterization of respiratory syncytial virus fusion inhibitor escape mutants: homology model

of the F protein and a syncytium formation assay

Morton, Craig J.; Cameron, Rachel; Lawrence, Lynne J.;

Lin, Bo; Lowe, Melinda; Luttick, Angela; Mason,

Anthony; McKimm-Breschkin, Jenny; Parker, Michael W.; Ryan, Jane; Smout, Michael; Sullivan, Javne; Tucker,

Simon P.; Young, Paul R.

CORPORATE SOURCE:

Biota Holdings Limited, Victoria, 3004, Australia

SOURCE:

Virology (2003), 311(2), 275-288 CODEN: VIRLAX; ISSN: 0042-6822

PUBLISHER:

Elsevier Science

DOCUMENT TYPE:

Journal

LANGUAGE:

English

Respiratory syncytial virus (RSV) is a ubiquitous human pathogen and the leading cause of lower respiratory tract infections in infants. Infection of cells and subsequent formation of syncytia occur through membrane fusion mediated by the RSV fusion protein (RSV-F). A novel in vitro assay of recombinant RSV-F function has been devised and used to characterize a number of escape mutants for three known inhibitors of RSV-F that have been isolated. Homol. modeling of the RSV-F structure has been carried out on the basis of a chimera derived from the crystal structures of the RSV-F core and a fragment from the orthologous fusion protein from Newcastle disease virus (NDV). The structure correlates well with the appearance of RSV-F in electron micrographs, and the residues identified as contributing to specific binding sites for several monoclonal antibodies are arranged in appropriate solventaccessible clusters. The positions of the characterized resistance mutants in the model structure identify two promising regions for the design of fusion inhibitors.

IT 317846-22-3, R 170591

> RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(homol. model of F protein of respiratory syncytial virus fusion inhibitor escape mutants and a syncytium formation assay)

RN 317846-22-3 CAPLUS

3-Pyridinol, 2-[[2-[[1-(2-aminoethyl)-4-piperidinyl]amino]-4-methyl-1H-CN benzimidazol-1-yl]methyl]-6-methyl- (9CI) (CA INDEX NAME)

REFERENCE COUNT:

THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN ACCESSION NUMBER: 2003:376893 CAPLUS Full-text

38

DOCUMENT NUMBER: 138:379184 TITLE:

Method for identifying or screening anti-viral agents against respiratory syncytial virus (RSV) using a

three-dimensional model of the RSV-F protein

INVENTOR(S):

Morton, Craig James; Parker, Michael William; Ryan,

APPLICATION NO.

DATE

Jane

PATENT ASSIGNEE(S):

Biota Holdings Ltd., Australia

SOURCE:

PCT Int. Appl., 224 pp.

CODEN: PIXXD2 Patent

DOCUMENT TYPE: LANGUAGE:

FAMILY ACC. NUM. COUNT:

English

PATENT INFORMATION:

PATENT NO.

KIND DATE

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	WO 2003040178			A1		20030515		1	WO 2002-AU1522						20021108			
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			co,	CR,	CU,	CZ,	DΕ,	DK,	DM,	DZ,	EC,	EE,	ES,	FI,	GB,	GD,	GE,	GH,
			GM,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	ΚE,	KG,	KP,	KR,	KZ,	LC,	LK,	LR,
			LS,	LT,	LU,	LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,	NO,	NZ,	OM,	PH.
			PL,	PT,	RO,	RU,	SC,	SD,	SE,	SG,	SI,	SK,	SL,	TJ,	TM,	TN,	TR,	TT,
			TZ,	UA,	UG,	US,	UZ,	VC,	VN,	ΥU,	ZA,	ZM,	ZW					
		RW:	GH,	GM,	ΚE,	LS,	MW,	MZ,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,	AT,	BE,	BG,
			CH,	CY,	CZ,	DE,	DK,	EE,	ES,	FI,	FR,	GB,	GR,	IE,	IT,	LU,	MC.	NL.
			PT,	SE,	SK,	TR,	BF,	ВJ,	CF,	CG,	CI,	CM,	GΑ,	GN,	GQ,	GW,	ML,	MR,
			ΝE,	SN,	TD,	TG											-	•
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	US	20052	2212	35		A1	A1 20051006 US 2004-492187							20040409				
PRIC	PRIORITY APPLN. INFO.:									7	AU 2	001-	3784		7	A 2	0011	109
										. 1	NO 2	002-2	AU152	22	V		0021	108

The invention relates to anti-viral agents which may be effective for AΒ treating, for example, respiratory infections by Respiratory Syncytial Virus (RSV). A three-dimensional structure model of the RSV-F protein has been generated and described which can be used to identify, screen, and/or develop anti-viral agents, including RSV neutralizing antibodies. The threedimensional structure model comprises, at least, the three-dimensional structure of a anti-viral target site comprising all or part of each of the following amino acids of RSV-F protein: Tyr33, Cys37, Ser38, Ala39, Val40, Ser41, Lys42, Gly43, Leu48, Arg49, Thr50, Lys315, Leu316, His317, Thr318, Ser319, Pro320, Leu321, Cys322, Thr323, Ser330, Asn331, Ile332, Cys333, Leu334, Thr335, Arg336, 20 Thr337, Asp338, Arg339, Phe352, Pro353, Gln354, Ala355, Glu356, Thr357, Cys358, Phe366, Cys367, Asp368, Thr369, Met370, Asn371, Ser372, Leu373, Lys394, Ile395, Met396, Thr397, Ser398, Lys399, Thr400, Asp401, Val402, Ser403, Ser404, Ser405, Val406, Ile407, Thr408, Ser409, Leu410, Gly411, Ala412, Ile413, Val414, Ser415, Lys419, Lys421 and Asp440. The structure model may also be used to develop RSV-binding antibodies useful for diagnostic assays.

IT 317846-22-3

> RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses) (RSV-F inhibitor; method for identifying or screening anti-viral agents against respiratory syncytial virus (RSV) using three-dimensional model of RSV-F protein)

RN 317846-22-3 CAPLUS

 $\hbox{3-Pyridinol, } 2\hbox{-[[2-[[1-(2-aminoethyl)-4-piperidinyl]amino]-4-methyl-1H-line of the property of the pr$ benzimidazol-1-yl]methyl]-6-methyl- (9CI) (CA INDEX NAME)

REFERENCE COUNT:

THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 11 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN ACCESSION NUMBER: 2001:12444 CAPLUS Full-text

DOCUMENT NUMBER:

134:86248

TITLE:

Preparation of benzimidazoles as respiratory syncytial

virus replication inhibitors.

INVENTOR(S):

Janssens, Frans Eduard; Meersman, Kathleen Petrus

Marie-Jose; Sommen, Francois Maria; Guillemont, Jerome Emile Georges; Lacrampe, Jean Fernand Armand; Andries,

Koenraad Jozef Lodewijk Marcel

PATENT ASSIGNEE(S):

Janssen Pharmaceutica N.V., Belg. PCT Int. Appl., 119 pp.

SOURCE:

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO.					KIN	KIND DATE			APPLICATION NO.						DATE				
WO	2001	.0006	000611 A1 200				2001	10104 WO 2000-EP5676								20000620			
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		CU,	CZ,	DE,	DK,	DM,	DZ,	EE,	ES,	FI,	GB,	GD,	GE,	GH,	GM.	HR.	HU.		
		ID,	IL,	IN,	IS,	JP,	KE,	KG,	KP,	KR,	KZ,	LC,	LK.	LR.	LS.	LT.	LU.		
		LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,	NO,	NZ,	PL.	PT.	RO.	RU.	SD.		
		SE,	SG,	SI,	SK,	SL,	ТJ,	TM,	TR,	TT,	TZ,	UA,	UG.	US.	UZ.	VN.	YU.		
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	RW:	ĢH,	GM,	ΚE,	LS,	MW,	MZ,	SD,	SL,	SZ,	TZ,	UG,	ZW,	AT.	BE.	CH.	CY.		
•		DE,	DK,	ES,	FI,	FR,	GB,	GR,	ΙE,	IT,	LU,	MC,	NL,	PT.	SE.	BF.	BJ.		
		CF,	CG,	CI,	CM,	GA,	GN.,	GW,	ML,	MR,	NE,	SN,	TD,	TG	,	,	,		
	CA 2376781			A1		2001	0104	1	CA 2	0.00-	2376	781		2	0000	620			
BR	BR 2000012054			Α		2002	0319		BR 2	000-	1205	4		. 2	0000	620			
ΕP	1196	408					2002	0417		EP 2	000-	9438	41		2	0000	620		
ΕP	1196	408			B1		2004	0915			-				,•				
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TR	2001	0380	4		Т2		2002	0521	•	TR 2001-3804					21	0000	620		
	2002						2002]	HU 2002-1723					20	0000	520		
JΡ	2003	5034	01		$^{\cdot}$ T		2003	0128		JP 20						0000	520		
EΕ	2001	00692	2		Α		2003	0217		EE 20						00006			
	4590						2006												
NZ	5154	18			Α		2003	1128	1	NZ 20	000-	51541	18		20	00006	520		
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AT 276244	${f T}$	20041015		2000-943841		20000620
AU 779516	B2			2000-58167		20000620
PT 1196408	${f T}$	20050131	PT	2000-943841		20000620
ES 2228559	Т3	20050416	ES	2000-943841		20000620
AP 1552	A	20060228		2002-2397		20000620
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SG 122814	A1	20060629		2004-362		20000620
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TW 248932	В	20060211	TW	2000-89112477		20000626
IN 2001MN0153	89 A	20050304	IN	2001-MN1539		20011206
MX 2002PA0011		20020702	MX	2002-PA112		20011219
HR 2001000933		20030630	HR	2001-933		20011219
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NO 2001006368		20020228	NO	2001-6368		20011227
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BG 106287	A	20021031	BG	2002-106287		20020108
HK 1046141	A1	20060922	· HK	2002-107761		20021025
US 2005234047	A1	20051020	US	2005-144103		20050603
US 7173054	B2	20070206		•		
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US 7173034	B2	20070206				
US 2006154913		20060713	US	2006-332557	•	20060112
US 2007021410		20070125		2006-519719		20060911
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			EP	2000-200452	Α	20000211
				2000-943841	A3	20000620
			. WO	2000-EP5676	W	20000620
				2001-30202	A3	20011227
				2005-144103	А3	20050603
OTHER SOURCE(S):	MARE	PAT 134:86248	}			

Use of title compds. [I; al:a2a3:a4 = (substituted) CH:CHCH:CH, N:CHCH:CH, AB CH:N:CH:CH, CH:CHN:CH, CH:CHCH:N; Q = R2R4NAX1, R2R4NCOAX1, specified (heterocyclic) ring, etc.; A = alkylene; R2 = H, CHO, alkylcarbonyl, pyrrolidinyl, piperidinyl, homopiperidinyl, aminocycloalkyl, etc.; R4 = H, alkyl, aralkyl; G = bond, alkanediyl; R1 = (substituted) piperidinyl, piperazinyl, pyridyl, pyrazinyl, pyridazinyl, pyrrolyl, furyl, thienyl, oxazolyl, thiazolyl, imidazolyl, pyrazolyl, etc.] for treatment of viral infection is claimed. Thus, 1,1-dimethylethyl 4-[[1-[[3,5-dihydro-3,3dimethyl-9-(phenylmethoxy)-1H-1,3-dioxepino[5,6-c]pyridin-2-yl]methyl]-1Hbenzimidazol-2-yl]amino]-1-piperidinecarboxylate was refluxed 6 h in 10N HCl to give 4-[[1-[[3,5-dihydro-3,3-dimethyl-9-(phenylmethoxy)-1H-1,3dioxepino[5,6-c]pyridin-2-yl]methyl]-1H-benzimidazol-2- yl]amino]piperidine. Tested I inhibited respiratory syncytial virus replication with IC50 = 0.00013-2.5119 μM.

IT 317846-21-2P 317846-23-4P 317846-24-5P 317846-25-6P 317846-41-6P 317847-12-4P 317847-13-5P 317847-17-9P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of benzimidazoles as respiratory syncytial virus replication inhibitors)

RN 317846-21-2 CAPLUS

CN 3-Pyridinol, 2-[[2-[[1-(2-aminoethyl)-4-piperidinyl]amino]-4-methyl-1H-benzimidazol-1-yl]methyl]-6-methyl-, tetrahydrochloride (9CI) (CA INDEX NAME)

●4 HCl

RN 317846-23-4 CAPLUS

CN Butanedioic acid, compd. with 2-[[2-[[1-(2-aminoethyl)-4-piperidinyl]amino]-4-methyl-1H-benzimidazol-1-yl]methyl]-6-methyl-3-pyridinol (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 317846-22-3 CMF C22 H30 N6 O

CM 2

CRN 110-15-6 CMF C4 H6 O4

HO2C-CH2-CH2-CO2H

RN 317846-24-5 CAPLUS

CN Butanedioic acid, hydroxy-, compd. with 2-[[2-[[1-(2-aminoethyl)-4-piperidinyl]amino]-4-methyl-1H-benzimidazol-1-yl]methyl]-6-methyl-3-pyridinol (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 317846-22-3 CMF C22 H30 N6 O

CM 2

CRN 6915-15-7 CMF C4 H6 O5

RN 317846-25-6 CAPLUS

CN Formamide, N-[2-[4-[[1-[(3-hydroxy-6-methyl-2-pyridinyl)methyl]-4-methyl-1H-benzimidazol-2-yl]amino]-1-piperidinyl]ethyl]- (9CI) (CA INDEX NAME)

RN 317846-41-6 CAPLUS

CN 1-Piperidineethanol, α -(aminomethyl)-4-[[4-methyl-1-[(6-methyl-2-pyridinyl)methyl]-1H-benzimidazol-2-yl]amino]- (9CI) (CA INDEX NAME)

RN 317847-12-4 CAPLUS

CN 3-Pyridinol, 2-[[2-[[1-(2-amino-3-methylbutyl)-4-piperidinyl]amino]-4-methyl-1H-benzimidazol-1-yl]methyl]-6-methyl- (9CI) (CA INDEX NAME)

RN 317847-13-5 CAPLUS

CN 3-Pyridinol, 2-[[2-[[1-(2-aminopropyl)-4-piperidinyl]amino]-4-methyl-1H-benzimidazol-1-yl]methyl]-6-methyl-, tetrahydrochloride, trihydrate (9CI) (CA INDEX NAME)

●4 HCl

●3 H₂O

RN 317847-17-9 CAPLUS

CN 1H-Benzimidazol-2-amine, N-[1-(2-amino-3-methylbutyl)-4-piperidinyl]-4-methyl-1-[(6-methyl-2-pyridinyl)methyl]- (9CI) (CA INDEX NAME)

IT 317847-86-2

> RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES

(preparation of benzimidazoles as respiratory syncytial virus replication inhibitors)

RN

317847-86-2 CAPLUS 3-Pyridinol, 2-[[2-[[1-(2-aminopropyl)-4-piperidinyl]amino]-4-methyl-1H-CN benzimidazol-1-yl]methyl]-6-methyl-, tetrahydrochloride (9CI) (CA INDEX NAME)

HCl

IT 317847-56-6P

> RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of benzimidazoles as respiratory syncytial virus replication inhibitors)

RN 317847-56-6 CAPLUS

1H-Benzimidazol-2-amine, 4-methyl-1-[(6-methyl-2-pyridinyl)methyl]-N-[1-CN (oxiranylmethyl)-4-piperidinyl]- (9CI) (CA INDEX NAME)

THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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(FILE 'HOME' ENTERED AT 08:36:41 ON 06 AUG 2007)

17

FILE 'REGISTRY' ENTERED AT 08:45:51 ON 06 AUG 2007 ACTIVATE B596519/A

·L1 STR

L2 2240 SEA FILE=REGISTRY SSS FUL L1

L3 STRUCTURE UPLOADED

L4 6 S L3 SAM SUB=L2

L5 64 S L3 FULL SUB=L2

FILE 'CAPLUS' ENTERED AT 08:49:35 ON 06 AUG 2007

L6 11 S L5

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ANSWER SET L6 HAS BEEN SAVED AS 'BB596519/A'

=> fil reg

COST IN U.S. DOLLARS SINCE FILE TOTAL ENTRY SESSION

FULL ESTIMATED COST ENTRY SESSION 60.79 104.56

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) SINCE FILE TOTAL ENTRY SESSION

CA SUBSCRIBER PRICE -8.58 -8.58

FILE 'REGISTRY' ENTERED AT 08:53:03 ON 06 AUG 2007 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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http://www.cas.org/support/stngen/stndoc/properties.html

.=> save temp 15 bb596519/a 'BB596519/A' IN USE

A single name cannot be used for two saved items at the same time. Enter "Y" if you wish to replace the current saved name with a new definition. Enter "N" if the current saved definition must be preserved. You may then reenter the SAVE command with a different saved name. Enter "DISPLAY SAVED" at an arrow prompt (=>) to see a list of your currently defined saved names.

REPLACE OLD DEFINITION? Y/(N):n

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ANSWER SET L5 HAS BEEN SAVED AS 'BBB596519/A'

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CA SUBSCRIBER PRICE	0.00	-8.58		

FILE 'CAPLUS' ENTERED AT 08:54:30 ON 06 AUG 2007
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FILE COVERS 1907 - 6 Aug 2007 VOL 147 ISS 7 FILE LAST UPDATED: 3 Aug 2007 (20070803/ED)

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COST IN U.S. DOLLARS

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FULL ESTIMATED COST

CA SUBSCRIBER PRICE

3.03 108.49

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

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STRUCTURE FILE UPDATES: 3 AUG

3 AUG 2007 HIGHEST RN 944028-34-6

DICTIONARY FILE UPDATES:

3 AUG 2007 HIGHEST RN 944028-34-6

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TSCA INFORMATION NOW CURRENT THROUGH December 2, 2006

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REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

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COST IN U.S. DOLLARS

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L10 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBERS

2005:567167 CAPLUS Full-text

DOCUMENT NUMBER:

143:97363

TITLE:

Preparation of piperidine-amino-benzimidazole

derivatives as inhibitors of respiratory syncytial

virus replication

INVENTOR(S):

Bonfanti, Jean-Francois; Andries, Koenraad Jozef Lodewijk; Janssens, Frans Eduard; Sommen, Francois Maria; Guillemont, Jerome Emile Georges; Lacrampe,

Jean Fernand Armand

PATENT ASSIGNEE(S):

Tibotec Pharmaceuticals Ltd., Ire.

SOURCE:

PCT Int. Appl., 54 pp.

CODEN: PIXXD2

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Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PAT	CENT	NO.			KIN	D	DATE		APPLICATION NO. D.					ATE			
WO	70 2005058873			A1	20050630			WO 2004-EP53606									
	W:	ΑE,	AG,	AL,	AM,	ΑT,	AU,	ΑZ,	BA,	BB,	BG,	BR,	BW,	BY,	BZ,	CA,	CH,
		CN,	CO,	CR,	CU,	CZ,	DΕ,	DK,	DM,	DZ,	EC,	EE,	EG,	ES,	FI,	GB,	ĠD,
		GE,	GH,	GM,	HR,	HU,	ID,	IL,	·IN,	IS,	JΡ,	ΚE,	KG,	KP,	KR,	ΚZ,	LC,
		LK,	LR,	LS,	LT,	LU,	LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,	NA,	NI,
		NO,	NZ,	OM,	PG,	PH,	PL,	PT,	RO,	RU,	SC,	SD,	SE,	SG,	SK,	SL,	SY,
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		ΑZ,	BY,	KG,	KZ,	MD,	RÚ,	ТJ,	TM,	AT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK.
		EE,	ES,	FI,	FR,	GB,	GR,	HU,	IE,	IS,	IT,	LT,	LU,	MC,	NL,	PL,	PT,
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			NE,														
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	R:	ΑT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,	FI,	FR,	GB,	GR,	HU,	IE,
							MC,										
			MK,												•		•
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US 2007093659 **A**1 20070426 US 2006-596519 20060615 MX 2006PA07109 Α 20060823 MX 2006-PA7109 20060619 PRIORITY APPLN. INFO.: EP 2003-104802 20031218 US 2004-566835P Ρ 20040430 WO 2004-EP53606 20041220

OTHER SOURCE(S):

MARPAT 143:97363

GI

$$R^{5}$$
 N
 R^{2}
 R^{3}
 R^{2}
 R^{3}
 R^{3}

The title compds. I [Q = alkyl optionally substituted with CF3, cycloalkyl, hydroxy, alkoxy, etc.; G = a direct bond or (un) substituted alkanediyl; R1 = Ar1 or a monocyclic or bicyclic heterocycle; one of R2a and R3a = alkyl and the other one of R2a and R3a = H; in case R2a is different from hydrogen then R2b = H or alkyl, and R3b = H; in case R3a is different from hydrogen then R3b = H or alkyl, and R2b = H; t = 1-3; Ar1 = (un) substituted Ph; R5 = H, alkyl; and their prodrugs, N-oxides, addition salts, quaternary amines, metal complexes and stereochem. isomeric forms] having inhibitory activity on the replication of the respiratory syncytial virus, were prepared E.g., a multistep synthesis of II, starting from 4,5-dimethylbenzimidazol-2-one, was given. The exemplified compds. I were tested for activity against RSV (data given). The pharmaceutical composition comprising the compound is disclosed.

REFERENCE COUNT:

THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L10 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN ACCESSION NUMBER: 2005:564655 CAPLUS Full-text

DOCUMENT NUMBER:

143:97374

TITLE:

Preparation of morpholine containing benzimidazoles as inhibitors of respiratory syncytial virus replication

INVENTOR(S):

Bonfanti, Jean-Francois; Andries, Koenraad Jozef Lodewijk; Fortin, Jerome Michel Claude; Muller, Philippe; Doublet, Frederic Marc Maurice; Meyer, Christophe; Willebrords, Rudy Edmond; Gevers, Tom Valerius Josepha; Timmerman, Philip Maria Martha Bern

PATENT ASSIGNEE(S):

Tibotec Pharmaceuticals Ltd., Ire.

SOURCE:

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DOCUMENT TYPE:

Patent English

LANGUAGE: FAMILY ACC. NUM. COUNT:

. 1

PATENT INFORMATION:

PATEN'	PATENT NO.					DATE			APPLICATION NO.									
WO 20	WO 2005058871										20041220							
W	: AE,	AG,	AL,	AM,	AT,													
•	.CN,	co,	CR,	CU,	CZ	, DE,	DK,	DM,	DZ.	EC,	EE.	EG.	ES.	FT.	GB.	GD.		
	GE,	GH,	GM,	HR,	HU	, ID,	IL,	IN,	IS,	, JP,	KE.	KG.	KP.	KR.	KZ.	LC.		
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•		NE,						•							•	•		
AU 200	AU 2004298460								AU 2004-298460					20041220				
	CA 2548668						CA 2004-2548668											
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R										IT,								
	ΙE,	SI,	LT,	LV,	FI,	RO,	MK,	CY,	AL,	TR,	BG,	CZ,	EE,	HU,	ΡĹ,	SK,		
		IS,	YU															
CN 189				A 20070110			CN 2004-80037825					20041220						
BR 200				A 20070313			1	BR 2	2004-1	17268	20041220							
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					A 20060823								20060619					
					A 20060918			NO 2006-3322					20060718					
PRIORITY A	PRIORITY APPLN. INFO.:									2003-1				A 20	00312	218		
										004-5			F	2 (00404	130		
										2004-1			_		00410			
OM!!!!!									VO 2	2004-E	EP536	520	V	V 20	0412	220		
OTHER SOURCE(S): GI				MARI	TAS	143:	97374											

AB The title compds. I [G = a direct bond or (un) substituted alkanediyl; R1 = Ar1 or a monocyclic or bicyclic heterocycle; Q = R7, pyrrolidinyl substituted with R7, piperidinyl substituted with R7 or homopiperidinyl substituted with R7; one of R2a and R3a = halo, optionally mono- or polysubstituted alkyl,

optionally mono- or polysubstituted alkenyl, nitro, hydroxy, etc.; and the other one of R2a and R3a = H; in case R2a is different from H atom then R2b = H, alkyl or halogen and R3b = H; in case R3a is different from H atom then R3b = H, alkyl or halogen and R2b = H; R5 = H, alkyl; Ar1 = (un)substituted Ph; R7 = alkyl substituted with heterocycle or alkyl substituted with both a radical OR8 and a heterocycle; R8 = H, alkyl, Arlalkyl; or a prodrug, N-oxide, addition salt, quaternary amine, metal complex or stereochem. isomeric form thereof] having inhibitory activity on the replication of the respiratory syncytial virus, were prepared E.g., a multi-step synthesis of II, starting from Et 3,4-diaminobenzoate, was given. The compds. I were tested for activity against RSV (data given). The pharmaceutical composition comprising the compound I is disclosed.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	6.60	116.89
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
2	ENTRY	SESSION
CA SUBSCRIBER PRICE	-1.56	-10.14

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STN INTERNATIONAL SESSION SUSPENDED AT 08:59:02 ON 06 AUG 2007